

AMENDMENT AND RESPONSE

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Serial No.: 09/933,889

Filing Date: August 20, 2001

Attorney Docket No. 100.250US01

Title: REDUCING NOISE ON COMMUNICATIONS LINES

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of claims:

1. (Original) A channel card for communicating asymmetric digital subscriber line (ADSL) traffic over a communication line, the channel card including:
 - an asynchronous transfer mode (ATM) section providing an interface to a cell bus of a chassis and providing ATM processing of cells; and
 - a transceiver section, coupled to the ATM section, the transceiver section including at least one subscriber port, the transceiver section providing for modulation and demodulation of data for the at least one subscriber port, the transceiver section including a common mode choke for reducing noise on the communication line.
2. (Original) The channel card of claim 1, wherein the ATM section includes:
 - a cell bus interface that is adapted to be coupled to a cell bus;
 - an ATM processor, coupled to the cell bus, for processing cells; and
 - an ATM transport convergence layer, coupled to the ATM processor, that provides an interface between the transceiver section and the ATM processor.
3. (Original) The channel card of claim 1, wherein the transceiver section includes:
 - a transformer that provides line matching for the transceiver section;
 - a protection circuit that provides surge protection for the transceiver section; and
 - wherein the transformer is coupled in series with the common mode choke and the protection circuit.
4. (Original) The channel card of claim 3, wherein the common mode choke comprises a transformer with a first winding in series with a tip connection of the transceiver section and a second winding in series with a ring connection of the transceiver section.

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5. (Original) The channel card of claim 3, wherein the common mode choke comprises an inductive choke element.
6. (Original) A method for reducing common mode noise on a communication line carrying asynchronous subscriber line (ADSL) signals, the method comprising:
- receiving ATM cells having data for transmission over the communication line;
 - processing the cells to remove the data;
 - preparing the data for transmission as ADSL signals over the communication line; and
 - passing the ADSL signals through a common mode choke to reduce noise in the ADSL signals prior to transmission.
7. (New) An ADSL communications system, the system comprising:
- a digital subscriber line access multiplexer, including:
 - one or more channel cards, the one or more channel cards adapted to communicate with one or more subscribers;
 - one or more line cards, the one or more line cards adapted to provide an interface to one or more networks over communication lines; and
 - a cell bus coupled to the one or more channel cards and the one or more line cards;
 - wherein the one or more channel cards include a common mode choke to reduce noise on ADSL signals communicated over the communication lines.
8. (New) The system of claim 7, wherein the one or more line cards comprises one of an OC-3 line card.
9. (New) The system of claim 8, wherein the OC-3 line card is further adapted for a SONET ring, a DS3 line card, or the like.
10. (New) The system of claim 7, wherein the cell bus provides communication of ATM cells between one or more channel cards and the one or more line cards in the chassis.

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11. (New) The system of claim 7, wherein the channel card further comprises:
an asynchronous transfer mode (ATM) section providing ATM processing of cells; and
a transceiver section, coupled to the ATM section, the transceiver section including at least one subscriber port, the transceiver section providing for modulation and demodulation of data for the at least one subscriber port, the transceiver section including the common mode choke.
12. (New) The system of claim 11, wherein the ATM section includes:
a cell bus interface that is adapted to be coupled to a cell bus;
an ATM processor, coupled to the cell bus, for processing cells; and
an ATM transport convergence layer, coupled to the ATM processor, that provides an interface between the transceiver section and the ATM processor.
13. (New) The system of claim 11, wherein the transceiver section includes:
a transformer that provides line matching for the transceiver section;
a protection circuit that provides surge protection for the transceiver section; and
wherein the transformer is coupled in series with the common mode choke and the protection circuit.
14. (New) The system of claim 13, wherein the common mode choke comprises a transformer with a first winding in series with a tip connection of the transceiver section and a second winding in series with a ring connection of the transceiver section.
15. (New) The system of claim 13, wherein the common mode choke comprises an inductive choke element.